

REMARKS

The Final Office Action mailed April 4, 2008, has been received and reviewed. Claims 6-11 are pending in the subject application. All claims stand rejected. It is proposed that independent claim 6 be amended as set forth herein. As such, upon entry of the proposed amendments, claims 6-11 will remain pending. It is submitted that no new matter has been added by way of the present amendments. Claims 6-11 stand rejected under 35 U.S.C. § 103(a). Reconsideration of the subject application is respectfully requested in view of the proposed amendments and the following remarks.

Support for Claim Amendments

Independent claim 6 has been amended herein to recite a clarification of the functionality exhibited by the plurality of individual rectifier/super capacitor devices, and, in particular, the super capacitor itself. Support for these claim amendments may be found in the Specification, for example, at page 7, paragraph [0024], and at page 11, paragraph [0034].

In general, amendments to the claimed subject matter is not "new matter" within meaning of 35 U.S.C. § 132 or Rule 118 of Patent Office Rules of Practice, unless it discloses an invention, process, or apparatus not theretofore described. Further, if later-submitted material simply clarifies or completes prior disclosure it cannot be treated as "new matter."¹ Accordingly, because these amendments are explicitly discussed, and inherent to, the novel operation of the super capacitors within the context of the power system, as memorialized in the Detailed Description, the newly recited subject matter does not constitute new matter.

¹ Triax Co. v Hartman Metal Fabricators, Inc., 479 F2d 951 (1973, CA2 NY); cert. denied, 94 S. Ct. 843 (1973).

Obviousness 35 U.S.C. § 103(a) Rejection Based upon U.S. Patent No. 6,184,593 to Jungreis in view of U.S. Patent No. 6,541,910 to Jungreis, U.S. Patent No. 5,737,202 to Shimamori and U.S. Patent No. 6,902,837 to McCluskey

Claims 6-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,184,593 to Jungreis (hereinafter the “Jungreis ‘593 reference”) in view of U.S. Patent No. 6,541,940 to Jungreis (hereinafter the “Jungreis ‘940 reference”), U.S. Patent No. 5,737,202 to Shimamori (hereinafter the “Shimamori reference”), and U.S. Patent No. 6,902,837 to McCluskey (hereinafter the “McCluskey reference”). As the Jungreis references, the Shimamori reference, and the McCluskey reference, whether taken alone or in combination, fail to teach or suggest all of the features of the rejected claims, Applicants respectfully traverse this rejection, as hereinafter set forth.

Independent claim 6, as amended hereinabove, recites, a power supply system for providing reliable electrical power to a telecommunications facility, where the facility contains telecommunications equipment. In particular, the system includes a plurality of individual rectifier/super capacitor devices, “each device including a rectifier and a super capacitor housed together, wherein the rectifier is operable to convert said AC electrical power to DC electrical power adaptable to power said telecommunication equipment.” Further, “each of said individual rectifier/super capacitor devices includes a first, a second, and a third connection point, the first connection point internally couples the rectifier to the AC power source, the second connection point internally couples the rectifier to a first side of said super capacitor and to the telecommunication equipment for providing DC power thereto, and the third connection point internally couples a second side of said super capacitor to ground.” In this way, the super

capacitor is operating as a filter to receive and rectify input AC power into useable output DC power.²

The super capacitor is further configured as a “power source to provide DC power to the telecommunication equipment when the first switching mechanism selectively couples said first connection point from said AC power source to said commercial electric utility.” Accordingly, “the DC power provided to the telecommunication equipment is uninterrupted.” In this way, the super capacitor functions as a back-up battery that supplies intermittent DC power to the telecommunications equipment when one power supply is interrupted and a reserve power supply is coming online.³

The Jungreis ‘593 reference does not teach using a super capacitor as a filter to generate usable DC power. Instead, the Jungreis ‘593 reference teaches converting AC to DC using a rectifier (DR1) in series with a filter (F1) and a capacitor (C1).⁴ Accordingly, the capacitor (C1) is not the filtering element of the Jungreis system. Further, the capacitor (C1) of the Jungreis ‘593 reference is not connected to ground, as recited by claim 6, but discharges into a DC bus.⁵ Further yet, the capacitor (C1) does not function as a backup power supply for intermittent interruptions of DC power while switching between power sources.

A fortiori, Jungreis ‘593 teaches away from utilizing a super capacitor as both a filter and a backup power source. In particular, the Jungreis ‘593 reference teaches away from utilizing the capacitor (C1) in disclosing “storage media 16’ [that] can conveniently be interfaces with the DC bus, either directly or using the dc-to-dc converter 22,” thereby providing backup

² See *Specification* at pg. 7, ¶ [0023].

³ *Id.* at pg. 8, ¶ [0025].

⁴ See *Jungreis ‘593 reference* at col. 3, ll. 13-61, and FIG. 4.

⁵ *Id.*, at col. 3, ll. 20-25.

energy.⁶ A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path the Applicants took.⁷ Here, because Jungreis '593 teaches that the use of additional storage media 16' for providing backup power, which the present invention attempts to avoid by selecting a super capacitor as a filtering component, one skilled in the art upon reading Jungreis '593 reference would have been led on a path divergent from that taken by Applicants' claimed invention.

As such, for at least the reasons stated above, Applicants content that independent claim 6, as amended herein, is not anticipated by Jungreis '593 reference and is in condition for allowance. Each of claims 7-11 is believed to be in condition for allowance based, in part, upon their dependency from claim 6, and such favorable action is respectfully requested.

In addition, it is respectfully submitted that knowledge of one of ordinary skill in the art fails to encompass the claimed feature of an individual rectifier/super capacitor device, where each device includes a rectifier and a super capacitor housed together for converting AC electrical power to DC electrical power. In particular, the device that has a second connection point internally coupling a rectifier to a first side of a super capacitor and to the telecommunication equipment for providing DC power thereto, and a third connection point internally coupling a second side of the super capacitor to ground is not known in the relevant field, as discussed hereinbelow.

Rather than pointing to specific information in the Jungreis '593 reference or other cited references that suggest claimed configuration of the rectifier/super capacitor device or the dual functionality of the super capacitor, the Office has supplemented this feature *sua sponte*.

⁶ *Id.*, at col. 3, ll. 48-61.

Nowhere does the Office particularly identify any suggestion or teaching, such as the identification of the relevant art, the level of ordinary skill in the art, the nature of the problem to be solved, or any other factual findings that might serve to support a proper obviousness analysis.⁸ Because no specific art or documentary evidence is referenced to support this assertion; as such, the Office has taken “Official Notice” and based the § 103(a) rejection on general skill in the art.

A prior art rejection should be based on an actual prior art reference while relying on Official Notice only where the facts asserted are well-known or of common knowledge in the art.⁹ *A fortiori*, assertions of technical facts in areas of esoteric technology, *e.g.*, “recognizing that rectifiers and capacitors are commonly paired to provide smoother DC output,”¹⁰ must always be supported by citation to some reference work recognized as standard in the pertinent art.¹¹

In this instance, the Office has not set forth the proper foundation for an Official Notice, nor established (a) including a rectifier and a super capacitor housed together to comprise an individual rectifier/super capacitor devices (b) operating the rectifier to convert AC electrical power to DC electrical power (c) configuring the individual rectifier/super capacitor devices with a first, a second, and a third connection point, (d) coupling the second connection point to the rectifier, to a first side of the super capacitor and to the telecommunication equipment for providing DC power thereto, (e) coupling the third connection point internally a second side of the super capacitor to ground, and (f) configuring the super capacitor as a power source to

⁷ *In re Gurley*, 27 F.3d 551, 31 USPQ 2d 1130, 1131 (Fed. Cir. 1994).

⁸ *See, e.g., Pro-Mold & Tool*, 75 F.3d 1568, 1573 (Fed. Cir. 1996).

⁹ MPEP § 2144.02(A); *In re Ahlert*, 424 F.2d 1088, 1091 (CCPA 1970) (finding that notice of facts beyond the record which may be taken by the Examiner must be “capable of such instant and unquestionable demonstration as to defy dispute”).

¹⁰ *Final Office Action* at pg. 3, ll. 11-15.

provide DC power to the telecommunication equipment when the first switching mechanism selectively couples the first connection point from a AC power source to a commercial electric utility, such that the DC power provided to the telecommunication equipment is uninterrupted, are well-known to a person of ordinary skill in the art. As such, the asserted general conclusion concerning what is common knowledge to one of ordinary skill in the art without some concrete evidence in the record to support this finding will not support an obviousness rejection.¹² The Office's assertion of Official Notice is considered traversed; accordingly, the Office must provide documentary evidence if the rejection is to be maintained.¹³

Without demonstrating as obvious the features of (a)-(f) above, the proposed combination offered by the Office does not satisfy the elements of the claimed subject matter, and, as a matter of law, the Office's rejection cannot stand. Moreover, the use of the super capacitor as a filter when converting AC power to DC power invokes the unexpected results of supplying intermittent power during an interruption, thereby eliminating the need for a separate backup power source (e.g., battery), as required by the Jungreis '593 reference.

As discussed above, the Jungreis '593 reference fails to teach or suggest all of the elements of independent claim 6, from one of which each of rejected claims 7-11 depends, either directly or indirectly. It is respectfully submitted that the Jungreis '940 reference, the Shimamori reference, and/or the McCluskey reference fails to cure at least the above-discussed deficiencies of the Jungreis '593 reference. More particularly, with respect to independent claim 6, it is respectfully submitted that the Jungreis '940, Shimamori, and McCluskey references fail to teach or suggest the newly claimed functionality of the super capacitor. Rather, the secondary

¹¹ *Id.*

¹² MPEP § 2144.03(B); *In re Lee*, 277 F.3d 1338, 1344 (Fed. Cir. 2002).

¹³ 37 C.F.R. § 1.104(d)(2).

references are cited in an attempt anticipate various embodiments of the power supplies. Accordingly, it is respectfully submitted that the Jungreis, Shimamori, and McCluskey references, whether taken alone or in combination, fail to teach or suggest all of the features of the claim 7, and, accordingly, of claims 6-11.¹⁴ As such, each of claims 6–11 is believed to be in condition for allowance and such favorable action is respectfully requested.

¹⁴ See 37 C.F.R. § 1.75(c) (2006).

CONCLUSION

For at least the reasons stated above, upon entry of the proposed amendments, it is believed that claims 6-11 will be in condition for allowance. As such, Applicants respectfully request entry of the proposed amendments, withdrawal of the pending rejections and allowance of the claims. If any issues remain that would prevent issuance of this application, the Examiner is urged to contact the undersigned – 816-474-6550 or btabor@shb.com (such communication via email is herein expressly granted) – to resolve the same. The fee for the Request for Continued Examination is submitted herewith; however, the Commissioner is hereby authorized to charge any additional amount required or any overpayment to Deposit Account No. 21-0765, referencing attorney docket number SPRI.103532.

Respectfully submitted,

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